Claims 75-118 are pending, with claims 107-111 withdrawn from consideration. Reconsideration in light of the following amendments and remarks is respectfully requested.

AMENDMENTS TO THE CLAIMS

Please kindly amend the claims as follows. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-74. (canceled)

Claim 75. (Currently Amended)   A vector comprising a first polynucleotide sequence encoding an antibody in operable linkage with a second polynucleotide sequence encoding an anti-tumor protein,

  wherein said antibody and said anti-tumor protein are expressed as a fusion protein,

  wherein said antibody binds 5T4 antigen on cells of a tumor, and

  wherein upon direct delivery of said vector to said tumor said anti-tumor protein is expressed in cells of said tumor thereby inhibiting the growth of said tumor.

Claim 76. (Previously Presented)   The vector of claim 75, wherein said first and second polynucleotide sequences are expressed in the interior of a tumor mass.

Claim 77. (Previously Presented)   The vector of claim 75, wherein said antibody comprises at least a part of an antibody sufficient to bind 5T4 antigen.

Claim 78. (Canceled)

Claim 79. (Currently Amended)   The vector of claim 78 claim 75, wherein said fusion protein is secreted.

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Claim 80. (Previously Presented)   The vector of claim 75, wherein the first polynucleotide sequence, the second polynucleotide sequence, or both first and second polynucleotide sequences further comprises a polynucleotide sequence which encodes at least one additional functional component, wherein the additional functional component is selected from the group consisting of a signal peptide, an immune enhancer, a toxin, and a biologically active enzyme.

Claim 81. (Previously Presented)   The vector of claim 75, wherein said antibody, said anti-tumor protein, or both said antibody and anti-tumor protein further comprises an additional functional component selected from the group consisting of a signal peptide, an immune enhancer, a toxin, and a biologically active enzyme.

Claim 82. (Previously Presented)   The vector of claim 81, wherein the additional functional component is a signal peptide.

Claim 83. (Previously Presented)   The vector of claim 75, wherein said vector is a retroviral vector.

Claim 84. (Previously Presented)   The vector of claim 83, wherein said retroviral vector comprises a tumor specific promoter enhancer.

Claim 85. (Previously Presented)   The vector of claim 75, wherein said anti-tumor protein is selected from the group consisting of an enzyme, a pro-drug activating enzyme, a toxin, all or part of a cytokine, an effector domain from an·immunoglobulin heavy chain, a domain which activates macrophage FcgR I, II, or III receptors and a domain which confers protein stability.

Claim 86. (Previously Presented)   A method of delivering an anti-tumor protein to a tumor, comprising directly delivering to the tumor the vector of claim 75.

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Claim 87. (Previously Presented)   A method of delivering an anti-tumor protein to a tumor, comprising directly delivering to the tumor cells transduced ex vivo with the vector of claim 75.

Claim 88. (Currently Amended)   A method for inhibiting the growth of a tumor in a mammal comprising delivering directly to the tumor a vector comprising a first polynucleotide sequence encoding an antibody in operable linkage with a second polynucleotide sequence encoding an anti- tumor protein,

wherein said antibody and said anti-tumor protein are expressed as a fusion protein,

wherein said antibody binds 5T4 antigen on cells of said tumor, and wherein said anti-tumor protein is expressed in cells of said tumor thereby inhibiting the growth of said tumor.

Claim 89. (Previously Presented)   The method according to claim 88, wherein said first and second polynucleotide sequences are expressed in the interior of a tumor mass.

Claim 90. (Previously Presented)   The method according to claim 88, wherein said antibody comprises at least a part of an antibody sufficient to bind 5T4 antigen.

Claim 91. (Canceled)

Claim 92. (Currently Amended)   The method according to ~~claim 91~~ claim 88, wherein said fusion protein is secreted.

Claim 93. (Previously Presented)   The method according to claim 88, wherein the first polynucleotide sequence, the second polynucleotide sequence, or both first and second polynucleotide sequences further comprises a polynucleotide sequence which encodes at least one additional functional component, wherein the additional functional component is selected from the group consisting of a signal peptide, an immune enhancer, a toxin, and a biologically active enzyme.

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Claim 94. (Previously Presented)   The method according to claim 88, wherein said antibody, said anti-tumor protein, or both said antibody and anti-tumor protein further comprises an additional functional component selected from the group consisting of a signal peptide, an immune enhancer, a toxin, and a biologically active enzyme.

Claim 95. (Previously Presented).   The method according to claim 94, wherein the additional functional component is a signal peptide.

Claim 96. (Previously Presented)   The method according to claim 88, wherein said vector is a retroviral vector.

Claim 97. (Previously Presented)   The method according to claim 96, wherein said retroviral vector comprises a tumor specific promoter enhancer.

Claim 98. (Previously Presented)   The method according to claim 88, wherein said anti-tumor protein is selected from the group consisting of an enzyme, a pro-drug activating enzyme, a toxin, all or part of a cytokine, an effector domain from an immunoglobulin heavy chain, a domain which activates macrophage FcgR I, II, or III receptors and a domain which confers protein stability.

Claim 99. (Currently Amended)   A method for inhibiting the growth of a tumor in a mammal comprising delivering directly to the tumor, cells transduced *ex vivo* with a vector comprising a polynucleotide sequence encoding an antibody in operable linkage with a second polynucleotide sequence encoding an anti-tumor protein,
    wherein said antibody and said anti-tumor protein are expressed as a fusion protein,
    wherein said antibody binds 5T4 antigen on cells of said tumor, and wherein said anti-tumor protein is expressed in cells of said tumor thereby inhibiting the growth of said tumor.

Claim 100. (Currently Amended)   A gene delivery system for targeting an anti-tumor gene to a tumor, wherein said gene delivery system comprises a vector comprising a first

polynucleotide sequence encoding an antibody which binds 5T4 antigen on cells of a tumor and a second polynucleotide encoding an anti-tumor protein,

wherein said antibody and said anti-tumor protein are expressed as a fusion protein,

wherein upon direct delivery of said vector to cells of a tumor said anti-tumor protein is expressed in cells of said tumor thereby inhibiting the growth of said tumor.

Claims 101-111. (Canceled)

Claim 112. (Previously Presented)   A method of treating cancer in a mammal, comprising administering directly to a tumor in said mammal a vector comprising one or more polynucleotide sequences encoding an antibody which binds 5T4 antigen on a tumor cell in said mammal in operable linkage with one or more polynucleotide sequences encoding a cytokine, wherein the polynucleotide sequences are expressed as a fusion protein in a tumor cell in said mammal thereby inhibiting growth of said tumor in said mammal.

Claim 113. (Previously Presented)   The method according to claim 112, wherein said fusion protein is secreted.

Claim 114. (Previously Presented)   A method of treating cancer in a mammal, comprising administering directly to a tumor in said mammal a cytokine and a vector comprising one or more polynucleotide sequences encoding an antibody which binds 5T4 antigen on a tumor cell in said mammal, wherein the one or more polynucleotide sequences are expressed as a fusion protein in a tumor cell in said mammal thereby inhibiting growth of said tumor in said mammal.

Claim 115. (Previously Presented)   The method according to claim 114, wherein said fusion protein is secreted.

Claim 116. (Currently Amended)   A method for inhibiting the growth of a tumor in a mammal comprising delivering directly to a first cell of the tumor a vector comprising a first polynucleotide sequence encoding an antibody in operable linkage with a second polynucleotide sequence encoding an anti-tumor protein,

wherein said antibody and said anti-tumor protein are expressed as a fusion protein,

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wherein said antibody binds 5T4 antigen on cells of said tumor, and wherein said anti-tumor protein is expressed in said first cell of said tumor and a second neighboring cell of said tumor, thereby inhibiting the growth of said tumor.

Claim 117. (Canceled)

Claim 118. (Currently Amended)   The method according to ~~claim 119~~ claim 116, wherein said fusion protein is secreted.